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Stephenson: Defining Concourses and Selecting Statements Using Fisher's Balanced Block Design and Newton's Fifth Rule

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Abstract: The most important aspects of Q methodology are defining the concourse and selecting representative statements. William Stephenson trained a number of his students in the technique, some of whom, in turn, went on to train their own students. Stephenson also left unpublished manuscripts in the Missouri Western Historical Manuscripts Collection that describe the professors and scientists who influenced his thinking as he developed Q methodology. He used Fisher's Balanced Block Design in his selection of self-referent statements. He also saw Isaac Newton's Fifth Rule as providing a justification for calling Q methodology a science of subjectivity and as guide to finding the simplest way to extract factors. I have used focus groups, content analysis and social media to identify concourses and the statements that represent them. I have drawn on Stephenson's health care studies as the foundation for my own studies of health care. In doing so I learned that balancing negative and positive statements in the Q sort is important for the best outcomes.

Key Words: concourse, Fisher's balanced block design, Newton's Fifth Rule, selecting Q statements

Introduction

I am a third generation Q-er. I first heard about William Stephenson during my Master's years at the University of Missouri School of Journalism (1978-1981), in Keith Sanders' research class. We did a simple exercise of sorting desserts, from the one we liked best to the one we liked least. I don't remember the results in detail, but we had a sugar-loving group (think chocolate cake), and a tart-loving group (think lemon pie). Sanders then explained how Q methodology could identify attitudes and preferences. I was far from understanding the concept of a "concourse," a "Q sample" or "factor arrays," but I was sure I wanted to know more about Q methodology. That would take several more years and additional lessons from Don Brenner (who was then Associate Dean of the University of Missouri (MU) Journalism (J-School) Graduate School) and Rob Logan (who joined the J-School faculty at about the time I began the Ph.D. program). Stephenson had trained Sanders, Brenner and Logan, whom I considered the second generation of Q-ers with Stephenson, of course, as the first generation.

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For three years after I received my Master's degree in 1981, I worked at Stephens College in Columbia, MO. I returned to the MU J-School in 1984 to establish the Media Research Bureau (MRB). During my nine-year tenure directing the MRB, numerous studies were conducted, including large-sample telephone surveys, mail surveys, focus groups and content analyses. Early on, I was directed to William Stephenson, not to talk about Q but to ask him about a newspaper readership study he had done for the Columbia Daily Tribune. I left that meeting knowing I had met my first bona fide genius. I now understood the esteem in which Sanders, Brenner and Logan held him.

My education in Q methodology soon began in earnest through the MRB. First, Sanders asked me to assist him with a Q study he was conducting for the Missouri Bankers Association. We started with a focus group with some bank directors. Sanders taught me how to look for self-referent statements that expressed opinions about "products and services" that banks were beginning to offer to their customers (life insurance, Certificates of Deposit, etc.). This defined the concourse of new products and services. Sanders finalized the Q sample, and we administered it to a group of bank employees who were attending a statewide conference. He then taught me to use QUANAL (the first software that would apply the proper scores to the statements in each person's sort and allow for centroid rotation of the factors). We worked together on the number of factors to draw, and then Sanders wrote the report for the bankers. I was well on my way to becoming a Q devotee because of the clear identification of attitudes toward changing banking practices in Missouri.

Meanwhile, I was continuing to conduct large-sample surveys and polls for MRB clients. I was interested in finding a way to move beyond opinions to the underlying attitudes that produced them. I began to make the connection between survey research and Q methodology when MU hosted the first Summer Institute for the Scientific Study of Subjectivity to honor Stephenson in 1985. This was the first of five Annual Institutes, that were followed by the annual ISSSS International Conferences that continue today. Stephenson presided over those early MU institutes. Several of his former students, such as Steven Brown, Albert Talbott, Dan Nimmo, Mike Strickland, Joy Patterson, Linda Shipley, along with his son Charles W.T. Stephenson and so many more third-generation devotees from around the world attended those early Q institutes to present papers and debate aspects of Q methodology.

From those conferences, I learned the most important aspects of a Q study are defining the concourse and selecting the best representative opinion statements from it. Before I explain how I applied these Q methodology lessons to my career-long health care research, I should explain that in addition to the media-related studies conducted through the MRB, the MU Hospital and Clinics and the Missouri Department of Health also commissioned studies. I was part of a 1992-1993 Sears Foundation/J-School study of African American newspapers in key cities with influential editors. The project included health care content (or lack of it) in the newspapers we studied. Since I was preparing to begin my Ph.D. dissertation research, the logical path was to conduct a health -care study that focused on minorities – and that used Q.

Keith Sanders became my dissertation chair. Since he knew of my experience with survey research and my love of Q methodology, he suggested that I look for ways to extend a Q study with a large-sample survey. I had long tried to reconcile Q methodology that seemed to me to be a rather subjective method (given the small, convenience samples; the number of factors interpreted; and even the nature of the interpretation of the factors) with the "reliable" science of sampling techniques used in polling and large sample telephone surveys. Several times during my career, I have

melded Q methodology with survey sampling in my health care studies. However, the Q study portion is what I am going to describe in detail here.

I was ready to embark on my first concourse exploration for my 1994 Ph.D. dissertation, *Directing Healthcare Messages Toward African-Americans, Attitudes Toward Health Care and the Mass Media. (*Garland Publishing, Inc., published a book based on the dissertation in 1998 as part of its Health Care Policy in the United States series). The heart of the research was a Q-methodology study, which involved identifying attitudes toward the health care system from middle and upper class (mostly Caucasian) individuals with low income (mostly African American) individuals.

This study was set against the background of President Bill Clinton's and First Lady Hillary Clinton's attempt to provide health care to the underserved, an effort that failed. I began by reading dissertations and Master's projects that Stephenson had directed. His students had done a project for a health clinic in Kansas City that served a predominately African American community. In the Stephenson archives (created after Stephenson's death in 1989), I also found a document titled, "The Vergent Report" that described his ideal health care system (Stephenson, 1971) These served as guidelines for the type of statements I needed to find regarding attitudes toward the health care system.

I also pulled self-referent statements from the Black newspaper study and from focus groups conducted in St. Louis and Kansas City with African American health groups to find out more about attitudes toward the American health care system of the 1990s. I was struck initially by a sense of "collective memory" of discriminatory behavior many had encountered in "White" hospitals. A strong religious tone also was apparent. For example, the Kansas City focus group met in a large recreation room at a church that hosted a clinic where blood pressure and blood sugar could be checked. A hospital-sponsored diabetes support group was utilized in St. Louis. I learned a lot about the terms members of these groups used to describe health conditions. For example, some talked about "sugar in the blood" rather than diabetes. They uniformly agreed that health conditions were not often shared with other family members. Diets, tobacco and alcohol use and communication were major topics.

Later in 1993, I attended a national symposium on minority health issues that brought government officials, health care providers and journalists together. Minority groups, such as Native Americans and Hispanics were brought into the conversation in addition to African Americans. Although society was facing pressure to be more "color blind," race, especially genetics, still played a prominent role in diagnosing and treating diseases.

Following these experiences, I literally had hundreds of self-referent statements. Sanders passed me along to Don Brenner (who was then director of the Stephenson Center at the MU J-School) to help define my concourse. Brenner was an expert in defining concourses, and identifying underlying structures and self-referent statements. So, we set to work.

Brenner told me to type the statements and cut them apart. We laid them all out individually on a large tabletop. I was bewildered by the sheer number and unsure how to pull the best sample. Under Brenner's guidance, I went through them all, sorting them into categories based on their similarity and then eliminated duplicate or unclear statements. Brenner and I then systematically read each of the remaining statements, placing them in categories that became the underlying structures. We eventually reduced the Q sample to 42 statements, categorized in seven underlying structures that were broad but mutually exclusive:

1. Specific problems of Blacks (7 statements)
2. Facilitators (3 statements)
3. Attitudes toward the health care system (7 statements)
4. Attitudes toward health (9 statements)
5. Access (14 statements)
6. Prevention (2 statements)
7. Health information (7 statements)

Brenner could instinctively select statements and balance them from negative to positive, but I have always struggled with balancing the Q sample. "It takes practice," he said. On the final reading, he pulled out a couple of statements that were stated positively. "You need to make these negative," he said. Both Brenner and Stephenson could visualize a balanced sample. I needed more help.

Brenner said that an almost equal number of positive and negative statements was the ideal, and he didn't deliberately select statements to fit into the neutral column on the grid as those would naturally happen with each person completing a sort. He said subjects should mark on the grid their true neutral statements to determine whether they were falling on or near the neutral column.

I joined the Manship School of Mass Communication at Louisiana State University (LSU) in 1994. I discovered the importance of balancing the statements when I did my first solo Q study on attitudes toward tobacco use at LSU in 2001 (Sylvester, 2003). I knew Stephenson had done a smoking study, so I thought I could just update his statements with self-referent statements from focus groups I had conducted. I didn't pay too much attention to whether the Q sample was balanced. After I collected the sorts, I realized that subjects had agreed with the majority of the statements, pushing the true neutral statements onto the negative side of the grid. I felt that I lost the nuances that perhaps would have resulted in more and clearer factors. I think this is most important for researchers who have not yet achieved the balancing instinct. Instead of having three distinct factors, I initially had two highly-correlated factors (both from non-smokers) and one opposing (current and former smoker) factor. Under better circumstances, I would have debriefed the subjects orally or asked them to explain in writing why they had placed statement on the extreme ends of the grid. This way I could have shown that members of the two factors could be interpreting the same statements differently. However, when no attention is paid to balance, those nuances can be lost, and the number of factors to interpret can be too limited or not as discriminatory as they should be. In this case, I decided to have only two factors -- a smoker factor and a non-smoker factor with no indication that people could be non-smokers for a variety of reasons, and smokers might have different experiences with tobacco use. This issue became very important to me when I decided to update my health care research when the Affordable Care Act (ACA, Obamacare) was debated, passed and began rolling out in stages.

From 2008, I had been conducting content analyses on media coverage and collecting self-referent statements. I also monitored opinion polls commissioned by media and organizations, such as the Pew Foundation and the Kaiser Family Foundation. I also had the self-referent statements from my dissertation to use as a foundation and to combine with self-referent statements about the ACA (Obamacare) pulled from t newspaper stories, editorials and blogs to form the Q sample. I had defined the concourse as attitudes toward the ACA, especially the main features that included establishing

exchanges, allowing children to remain on their parents' insurance until age 26, no cap on insurance payouts and no discrimination against those with pre-existing conditions.

Health Care Attitudes in 2010

During the fall 2010 semester, I was on sabbatical leave from LSU. I returned to the MU J-School, which gave me access to Stephenson's papers housed at the Western Historical Manuscript Collection on the MU campus. Additionally, 2010 was a midterm election year, and Obamacare was front and center in that election.

I sought assistance from Rob Logan, who was then at the National Library of Medicine. We had recently collaborated on a health -promotion grant project unrelated to Q following Hurricane Katrina. When I started my Obamacare study, I asked his advice on how to select statements from the concourse. I began with 75 statements that I had placed in eight underlying structures (which were quite different from my dissertation structure):

Resentment (6 statements)
Current health care system opinions (10 statements)
Self-reliance (7 statements)
Government involved in health care (17 statements)
Unfairness (6 statements)
Health care as a right (4 statements)
Specific features of the Act (20 statements)
Media-related (5 statements)

To select the most representative statements from the first 75, Logan recommended using a Fisher's Balanced Block Design, which Stephenson had used in designing his studies (see Stephenson, 1953 Ch. 3) I sent Logan about 75 statements that I had pulled from my defined concourse. He demonstrated how to use the Balanced Block Design to categorize them. (See Appendix A.)

I then began to explore Stephenson's manuscripts, many of them unpublished, from the Stephenson Archives in Columbia, Missouri. I initially was looking for his thoughts on Fisher's Balanced Block Design and anything relevant to his health care studies. I found a substantial unpublished manuscript where he shared how scientists and his own professors had molded his thinking about subjectivity, including Newton's five rules and Fisher's Balanced Block Design that provided the foundation for Q methodology. Many of my questions about concourse definition and statement selection were answered by Stephenson's own words from unpublished manuscripts in the archives.

Stephenson and the Evolution of Q

In *Operant Subjectivity: Q-Methodology, Quantum Theory and Newton's Fifth Rule (*1978-1979*, unpublished manuscript)*[1] Stephenson discussed the influences that led to his development of Q methodology:

[1] The first chapter of this manuscript was published posthumously in *Operant Subjectivity* (Stephenson, 1993-994).

> Thus, by the early 1930s, what had been firmly implanted in me were three profound principles, - one of states of *pleasure-unpleasure*, encompassing both Freud's and Spearman's primary principles; another of ethical dimensions, a thrust toward a science for *moralities*; and *reality,* a principle of acceptable pain….Thus, the lines were laid for whatever I have done in psychology to develop it in relation to these early imprintings, principles of pleasures, of morality, of reality, of self-reference (pp 3-4, original emphasis)
>
> …a distinction has to be drawn between matters of objective fact (like the time of day, atomic numbers, my weight) which are singular bits of information which do not spread, and matters of *self-reference*, which are "infinite about anything." (p. 4)
>
> What is self-referent is usually hidden in the generalities of proverbs, similes, and allusions (pp. 5-6)
>
> Its development has led us to understand the mysteries of consciousness, in which self-reference is omnipotent, explicit or not (p. 7)

Furthermore, Stephenson relied on Fisher's Balanced Block Design to underpin how to classify the Q sample selected from the concourse. He concludes that all statements express either:

1) Feelings (pleasure-unpleasure)
2) Morality (positive –negative)
3) Reality (realistic-unrealistic)

(1978-1979, Ch. 1, p. 10)

Thus, a Fisher's Balanced Block Design can be expressed in tabular form:

Figure 1: Fisher Balanced Block Design Table

Causes	**Effects**	
A. Feeling	Pleasure (a)	Unpleasure (b)
B. Morality	Positive (c)	Negative (d)
C. Reality	Realistic (e)	Unrealistic (f)

(Adapted from Stephenson, 1978-1979, Ch 1 p. 10)

This table illustrates three different causes (A, B, C) with three different effects, acting and interacting simultaneously. Stephenson likened this to an experiment in which metal is subjected to heat (A), pressure (B), and electric charge (C) simultaneously (1978-1979, p. 12). Stephenson states that "the Fisher design is a first step toward scientific experimentation in the classical sense of assuming causes, and seeking to test for their consequences, which are the 'effects' in the above table" (p. 12).

Fisher's "multi-causal" design provided the structure for a Q sort (the forced distribution that is represented by the Q grid). [2]

In subsequent chapters of this work, Stephenson (1978-1979) continued to describe the concourse and the factors that should emerge from any given sort. He notes: "… it is the declarative subjectivity, of wish, opinion, hope, desire, that constitutes concourse" (Ch. 2, p. 14).

In explaining factors, Stephenson (1978-1979) stated:

> Factors are schemata of implicit self-reference. Having regard to the neopsychoanalytic theoretical positing, this suggests that Q-factors must have significance, and that what has been dealt with as the unconscious mind can be made operational in Q-methodological terms. Systems-theory appears to sanction what, in Q methodology, is already operational and indeed operant (Ch. 3, p. 21).

In this chapter, Stephenson also speaks of factor arrays as "theoretical Q sorts." He says: "Theoretically, a common state of feeling runs through a factor, from one end of it to another, embracing each statement of the Q sample – and different for different factors" (Stephenson, 1978-1979, Ch. 3, pp. 9-10). It then becomes the researcher's duty to determine these states of feelings "upon the basis of which interpretation and understanding can proceed" (Ch. 3, p. 10).

While Stephenson stressed that, "Q sorting" is "purely descriptive, expressive of one's natural feelings," additionally, "what makes science in Q Methodology" is that other researchers can repeat his experiment. Note that he does not use the word "replicate" because he would not expect a given Q study to be replicated in the sense that quantitative researchers might use that term, but rather that the process can be repeated with the same, similar or different concourse or Q sample, producing factors that must then be interpreted based on scientific principles.

These elements led to Stephenson's embrace of Newton's Fifth Rule. Newton's rules were new to me, so I was surprised by Stephenson's reliance on these rules to justify the *scientific* nature of Q. He also wrote a lot about Newton in his unpublished work, likely because of his training in physics.[3]

Stephenson interpreted all of Newton's rules as governing Q methodology and its science (Stephenson, 1978-1979, Ch. 11, p. 1).

Newton's first four rules are:

> Rule I: Nature is essentially simple; therefore, have [as] few hypotheses as possible.
>
> Rule II: Similar effects must be assigned the same cause (the principle of uniformity of nature).

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[2] Stephenson also provided Fisher's variance equation: =
$\sum d^2 = \sum A^2 + \sum B^2 + \sum C^2 + \sum AB + \sum AC + \sum BC + \sum d^2 \sum ABC + \sum R^2$.

[3] Stephenson's published work on Newton's Fifth Rule includes Stephenson (1978a, 1979, 1980, and 1982a &b).

> Rule III: Properties common to bodies on which we experiment are to be assumed (if only tentatively) to pertain to all such bodies in general (needed for universals).
>
> Rule IV: Propositions induced from experiment should not be confuted merely by proposing contrary hypotheses.

Then, in 1960, a Fifth Rule was discovered among Newton's papers that he had – for unknown reasons – suppressed (1978-1979, Ch. 11, p. 5).

> Rule V: Whatever is not derived from things themselves, whether by the external senses or by internal cognition, is to be taken for hypotheses… and what neither can be demonstrated from the phenomena nor follows from them by argument based on induction, I hold as hypotheses.

And Stephenson's (1978-1979) interpretation of Newton's Rule V is:

> Different hypotheses for a concourse, none capable of proof or disproof, are subjective hypotheses. Such have a place in induction, by way of operant factors, inherent factor-structure, and the subjective hypotheses proffered in relation to the structure. (Ch. 11, p. 14)

I found Stephenson's Newton's Fifth Rule interpretation so important because while subjectivity is the lynchpin, the "testing" of the operant factors is what allows Q methodology to be, in fact, a scientific method. Q is the best way -- Stephenson would say the only way – to study subjectivity, to go beyond mere opinions to the deeper attitudes. As health care studies illustrate, the concourse is changeable (expanding or contracting as conditions change) and indicate that attitudes can change over time.

Stephenson (1978-1979) summed up Q methodology this way:

> We now know that all subjectivity (with meaning "I am, I believe, I understand, etc.") is subject to operant factor structure; we know that communicability is at issue, not sensationalism; we know that all subjectivity is covered in concourse. (Ch. 11, p. 13)

In a second unpublished manuscript titled *Newton's Fifth Rule*, Stephenson (1975-1976) described "concourse, meaning and self." He "counsels care" in concourse development and Q-sample composition and reminds, "If one wants to be more profoundly systematic, however, the concourse has to be defined at the outset" (Ch. 3, pp. 71, 74).

He also described some ways in which concourses can be developed:

> Words, as poets tell us, reveal the soul; they are the shadows of our feelings. But they have to be felt, and in the development of concourses, somehow *earned*. It is surprising what may come from conversations with twenty ordinary persons; and even more can be elicited from a discerning person who expresses beliefs passionately (Ch. 3, p. 75).

Stephenson then provided the following "notes" to help "support what we have in mind for concourses":[4]

(1) Concourses are statistical quantities of "statements" about subjective situations….
(2) Concourses are pragmatically grounded.
(3) All subjective communication is reducible to concourses, whether in the sciences, the arts, or any other domain of thing communicable.
(4) That complex subjectivity situations are so reduced to concourses is not to be taken as a reductionist assumption.
(5) The number of concourses is infinite, and there may be different concourses for a situation.
(6) All "statements" of a concourse have self-referent possibilities (Stephenson, 1953).
(7) It is assumed that each "statement" of a concourse, or of a sample drawn from it, is equally probable *a priori and equipotential a priori*[5] (Ch. 4, pp. 142-143, emphasis in original).

Next, Stephenson turned to Peirce's law of schemata. First, he asserts that "the concreteness of situations should never be forgotten" (1975-1976, Ch. 4, p. 90). In nearly poetic fashion, he described what to expect from a factor-array:

> Second, the schemata of factor-arrays are never-ending surprises. It is astonishing to see with what orderliness the statements proceed – tailor-made it seems – from saliency to saliency, and this applies differently for each factor, for the self-same Q-sample. Exceptions to the law of schemata are so rare that we dare to wax psychoanalytical about them… (1975-76, Ch. 4, p. 90).

Current Applications of Stephenson's Work

Since 2010, I have been applying Stephenson's unpublished work to my research on attitudes toward the American health care system research. Once statements were selected from the national health care system concourse, Fisher tables were used to begin the selection of statements as Stephenson described. At Logan's suggestion, an 11-point Thurstone Equal Appearing Interval scale was used to check for balance (positive to negative) and to reduce the number of statements by eliminating statements that were consistently ranked as neutral by a small number of "judges" who rank each statement from strongly disagree to strongly agree. The 11-point scale allows for more nuanced rankings.[6] (See Appendix B for an example.)

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[4] The concourse notion was subsequently developed more fully in Stephenson (1978b) and, especially, in Stephenson (1986a & b).

[5] "a priori" is defined as "involving deductive reasoning from a general principle to a necessary effect; not supported by fact."

[6] Information about Thurstone scales can be found at Logframer, a free project design and management application.

In writing about Newton's Fifth Rule, Stephenson does not speak directly to the need to have a balanced concourse – that is, about an even number of statements that are positive and negative. While he speaks about this structure in the Fisher Block Design, he does not address the need for balance in the Q sample although the forced distribution implies the need for this. Of course, he did address the issue in The Study of Behavior, where he explains that "(i) the sample should be *balanced* with respect to at least one effect" and (ii) it should be homogeneous." He further says that "for every statement with a *positive* assertation or meaning there can always be chosen another with a *negative*." He warns against using exact opposites (good…bad), but rather statements of "good health" should be balanced with statements of "ill-health" (Stepheson, 1953 p. 73, pp. 78-79).

This has always been the most troubling aspect of selecting the Q sample for me. I loved every one of my 75 statements, and I could justify, at least to myself, why every statement should be included (except to eliminate redundancy). However, I had to narrow the field if I wanted to end up with the factor arrays that would flow "from saliency to saliency" from beginning to end.

Both characterizing the statements in the Fisher tables and the Thurstone rankings served to make sure that the statements adequately represented the concourse and that a good balance between positive and negative statements exists, with the added benefit of highlighting the consistently neutral statements that likely can be deleted from the sample. That process reduced my initial 75 statements to a more manageable 36 statements for the Q sample.

I used the statements first as Likert (5-point) scales in an online survey of LSU faculty and staff in the spring of 2010. Then using the same statements in the Q sample, I collected sorts from subjects in Missouri and Louisiana. Finally, I extended the online survey with my Q sample, using the technique I had used in my dissertation. I presented the results at the Akron Q Conference that year (Sylvester, 2010).

The Election of Donald Trump and Health Care Attitudes

During Barak Obama's presidency, the Republicans, who had regained control of the U.S. Congress in 2010, tried unsuccessfully more than 60 times to repeal the ACA (Obamacare). With the election of Donald Trump in 2016, the Republicans again immediately attempted to "repeal and replace" the ACA. After Senator John McCain assured that the attempt failed, Republican Senators Lindsay Graham (R-SC) and Bill Cassidy (R-LA) made a last-ditch attempt to substitute block grants directly to states as a way to strangle the ACA. The attempt never made it to a vote (although Cassidy continued to pitch the idea to President Trump).

Clearly, the concourse had evolved once again. For one thing, the ACA had been in place for several years, and many people now liked it. The failure to repeal the ACA also meant that Congress moved on to other matters and it became less of an issue for the American people. Then, the Democrats regained control of the House in 2018 further pushing total repeal off the agenda. The news media were also providing less coverage – or perhaps more partisan coverage – than in 2008

Focus groups now seemed too time-consuming and impractical for pulling statements. News coverage was useful, but the partisan nature of coverage could have meant the statements were skewed too much toward one side or the other. The solution was found by accident. The LSU Manship School of Mass Communication has established a Social Media Analysis & Creation Lab to teach students and faculty how to do social

media research. I was learning to use Crimson Hexagon, a useful software tool for capturing and analyzing social media posts, when I realized it provided a rich source of self-referent opinion statements. All of the posts can be downloaded for easy analysis. Such analyses must be used with caution, however. The infiltration of fake accounts and "fake news" means that care must be taken in selecting comments. However, Twitter tweets are identifiable, such as #MAGA (Make America Great Again) or #ElizabethWarren to help identify who was posting them. However, selecting self-referent statements is less dependent on the source than on the opinion expressed.

Self-referent statements were selected from about 1,000 statements that Crimson Hexagon pulled from the social media universe on this topic. A brief content analysis, using Semantic Network Analysis (SNA), was conducted to look for frames (or underlying structures) that could be extracted from the data. The technique involves finding key words and looking at how they are related to each other. (See Appendix C.)

About 75 self-referent statements were again in the initial collection, including some statements from the 2010 Q study. This time around new elements included Graham/Cassidy block grants and the Democrats discussion about "Medicare for all." Drug prices and expanded Medicaid also achieved prominence.

Given my concern about balancing the statements (with similar numbers of negative and positive statements), and my plan to do a large national survey study that was going to include 5-point Likert scales, additional steps were taken to reduce the number of statements. Fisher tables were used for newer concept statements, and a Thurstone Equal-Appearing 11-point scale was administered to eight adults (half from Louisiana and half from out-of-state adults ranging from their 30s to their 70s), two LSU graduate students and 15 LSU undergraduate students. The Manship School Media Effects Lab was employed to administer the scales set up on Qualtrics software to students. The adults were sent a link to the Qualtrics Thurstone scales.

To determine the ranking for each statement, means and standard deviations (plus interquartiles) were run using SPSS. The population was then reduced to 42 statements by eliminating the statements that clearly were irrelevant to defining attitudes – those that were consistently neutral after the Thurstone scale was analyzed. Additional demographic questions were added to assist in analyzing the opinion statements.

The 2018 national study used a Qualtrics online panel matched to key census data. Timing dictated that I conduct the national survey before the Q study. I made sure that the statements selected would be a part of both studies. I also collected demographic data, including information about the type of insurance they had, such as Medicaid, Medicare, exchanges or employer supplied. Including the statements on the national Qualtrics e-mail survey provided an additional check on the statements and whether they appeared to be discriminating in terms of potential Q arrays.

The Q sorts were administered using statements on card stock, a grid and a short demographic questionnaire. Participants ranged from LSU staff members (who completed the sorts in a group setting during a lunch hour) to out-of-state adults who were mailed the Q sort. We included African American graduate students from LSU.

I used PQMethod software to analyze the collected sorts. Four factor arrays (theoretical Q sorts) were defined and described. One factor has been present from the 1990s, although it has gotten stronger in the Obamacare era. Those on this factor tend to be conservatives who simply do not want government involved in health care and who do not want to pay for other folks' insurance. A second factor that first emerged in the 2010 study includes those who feel strongly that health care is a right, not a privilege. The third factor members believe that government must be involved in health

care in order to make it fair for all. The fourth factor members are simply tired of the health care debate. Those on this factor are happy the Republicans failed to repeal it, and they believe everyone has a right to insurance of their choosing. Their concern is mostly about preserving the elements of the ACA, especially the pre-existing condition clause.

The preliminary attempt to cluster the national survey responses around the four Q factors appears to have worked. Of course, Q provides the stronger identification and description of the underlying attitudes. The survey just adds additional support that these attitudes exist nationally and that politicians would do well to remember that different groups of voters express different concerns about their health care. A divide between high-income and low-income individuals is clear, with high-income individuals likely to have employer-sponsored insurance and less concern about covering pre-existing conditions. The survey also showed that single mothers were the most concerned about having affordable insurance for themselves and their children. Using the combined technique only strengthens the study if the Q study is set up properly.

Conclusions

The type of Q study planned dictates how the concourse should be defined and how the Q sample is selected. Social media, for example, is most useful for politics, social issues and major news stories. Focus groups are most useful if the parameters are not well known and the topic can have multiple facets to explore. A smaller, well-defined group in a particular industry may require one-on-one interviews and industry publications.

Regardless of the topic and concourse, the Fisher Balanced Block Design is useful in determining the breadth of the statements and to help with balance. Using Thurstone scales is one way to check for balance, making sure to have about an equal number of positive and negative statements with some neutral statements included for good measure. Otherwise, doing a small pilot can also be used to check for balance.

The final step is to get people to complete the sort. I prefer to have nearly as many participants as I have statements. Stephenson, however, was quite comfortable with a small number of participants who were asked to sort the same statements more than once under different conditions of instruction. In fact, in the *Study of Behavior*, Stephenson's arguments were built around the promotion of single-case studies. I prefer to get participants who offer a wide variety of demographics, depending on the topic. For the health care studies, I wanted a balance of males and females, age ranges, income ranges and political leanings. However, an all-male or all-female study is useful for some topics. People with a specific medical or mental condition might be selected regardless of gender or age.

One of the most important sources of information for Q novices is the Q methodology Listserv. It is an extension of the Q conferences and an excellent location for advice and answers to questions posed to the community. The Q methodology website (https://qmethod.org) also provides a sense of history and provides a link to issues of *Operant Subjectivity*, the ISSSS journal. Q has been an international movement from the beginning and is so today. Yet Q methodology continues to face challenges. Convincing Ph.D. committees and journal editors that Q is scientific has certainly gained ground, but the war is not won. Q has also moved online, but many questions remain about whether the experience is the same as using hands-on methods. Questions still are asked about forced vs. unforced distributions, conditions of instruction and the mathematical underpinnings of factor rotations, eigenvalues, z-scores and so on.

Although I personally like to stay as close to Stephenson's technique as possible, I acknowledge that Q methodology must continue to grow and explore new frontiers if the challenges are to be overcome. Q methodology has captivated me from the beginning specifically because of its flexibility and usefulness in a variety of disciplines when subjectivity is the focus of the study. I am grateful that I met William Stephenson and had some time to explore his thought in his unpublished manuscripts. I am also proud to have been taught Q methodology by the pioneers who saw its infinite possibilities.

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APPENDIX A
(Fisher Table/Thurstone Scale)

Key:

Stephenson's Fisher Table	***Rob Logan's Suggestions***	***Thurstone Scale***
A=Feeling; B=Morality; C=Reality	BF=Selected Statements	~~=Both extremes(1) (11)
a=Pleasure b=Unpleasant	*+ = Positive toward law	selected. (8 people)
c=Positive d=Negative	*#= Neutral toward law	
e=Realistic f=Unrealistic	*-=Negative Toward Law	

Boldface indicates statements selected for the sort.

Feeling Statements

A/ace 16. American health care is very good for those with insurance coverage.
A/acf 19. I am responsible for the state of my own health.*#
A/acf 43. The government needs to stop worrying about everyone at some point and just step back and let health care be a private choice. ~~
A/acf 56. I have a great deal of pride in the American health care system.
A/acf 67. America has the best health care in the world. ~~
A/adf 62. Health care needs to be reformed but not in the proposed manner.
A/adf 72. Health care needs reform, but the current measure is not the way to do it.*-
A/adf 73. Health care needs to be fixed, but the government is utterly incapable of doing so now and in the future.
A/bde 21. I go to a doctor only when I'm really sick or injured.
A/bde 53. If I really wanted to know what was going on with health care reform, I had to go online and search out information for myself.*#
A/bde 71. A health care system that gives everyone the care they need is never going to happen.
A/bde 75. Health care reform is confusing because the media put out so much false information about what the law will do to either fix or hurt our current system.*# ~~
A/bdf 13. Go to school, get an education, get a good job with benefits -- if you can't afford health care it's your own damn fault.
A/bdf 14. Free health care is not a right. ~~
A/bdf 2. There is not much I can do to keep from getting sick.
A/bdf 26. Pres. Obama and most of the Democrats in Congress were in too much of a rush to pass health care reform and did not take the time to put together a good plan.*-
A/bdf 31. The health care reform act will result in "death panels" that will decide whether people will or will not get the medical care they need to live.*-
A/bdf 45. Pres. Obama's health care reform has moved us closer to socialism.*-
A/bdf 46. People need to get a job and stop relying on government help.
A/bdf 48. It is not my duty as a tax payer to pay for other people's health care coverage.*-
A/bdf 50. It doesn't matter what I think. Washington will do what it wants when it comes to health

care reform.

A/bdf 54. I hope the Republicans will not succeed in repealing health care reform.*+

A/bdf 55. I have never been more outraged with an act of congress and our president than I was with the passage of the health care reform act.*-

A/bdf 59. Health care sucks as it is. Anything will be better than the nonsense we have right now.

A/bdf 63. Health care is fundamentally flawed, but there is no satisfactory government-sponsored solution.*-

Morality Statements

B/ace 15. Everyone, regardless of preexisting conditions, should be able to afford health care insurance.*+

B/ace 17. Every citizen is entitled to have his or her basic health care needs met.*- ~~

B/ace 3. Stopping fraud and waste will make health care for everyone affordable.*#

B/ace 40. The health care reform act recently passed by Congress will not help senior citizens at all.*+

B/ace 66. Establishing a system of universal health care is both morally proper and fiscally necessary. ~~

B/acf 20. I believe that access to life-long health care is a right -- not a privilege.*+

B/acf 30. The government should care that citizens such as myself can afford health insurance because I am capable of doing a lot of good for society if I'm healthy.*+

B/acf 33. The real key to good health is to lead a clean, moral life. ~~

B/acf 41. The health care reform act recently passed by Congress will help minorities obtain health care.*+

B/acf 49. It is more important for an American health care system to give free medical care to the poor and disadvantaged than to give free care to middle- and upper-income citizens.

B/acf 60. Health care should include a public option in order to keep costs for all Americans down.

B/adf 47. It's important for everyone to have affordable health insurance because right now if you don't have insurance you probably won't get to see a doctor when you really need one.*+

B/adf 74. America needs to fix health care, but forcing private insurers out of business for a socialist health care system is un-American and is sowing the seeds for the downfall of this nation.*- ~~

B/bde 25. People abuse the health care system already.

B/bde 28. The ability to maintaining a healthy lifestyle is simply out of the reach of those on fixed incomes, the unemployed or the underemployed. ~~

B/bde 39. The health care reform legislation doesn't address most of the problems that the majority of Americans face.*-

B/bde 65. Everyone does not have equal access to health care.

B/bde 9. Lack of access to basic health care is an urgent issue currently troubling American society.*+

B/bdf 18. Health care is a luxury not a right.*# ~~

B/bdf 23. Illegal aliens are abusing our health care system.

B/bdf 4. Rich people get better medical care than poor people.

Reality Statements

C/ace 1. We should pull our money together in a non-profit health care co-op rather than depend on the government or private health care.

C/ace 11. I've been living under the old health care system for a long time and have had no problems.

C/ace 12. Health insurance companies should be allowed to sell policies across state lines.~~

C/ace 27. Regardless of the economic turmoil, health care needs to remain at the forefront of political issues being addressed.*+

C/ace 32. The news media really helped me understand what the health care reform act will and will not do for me.*# ~~

C/ace 36. The U.S. government should fund health programs that will help prevent childhood obesity and keep children from starting to smoke or drink alcohol.

C/ace 44. The American people are entitled to the same health care benefits that member of Congress enjoy.*+ ~~

C/ace 68. **Allowing kids to remain on their parents' insurance until they are 26 will mean more young people will be insured.*+**
C/ace 69. All businesses with 50 or more employees should be required to provide health insurance for all full-time workers.
C/acf 64. Health care can be reformed regardless of the state of the economy.
C/ade 5. Providing universal health care would help those who cannot afford health care.
C/ade 8. **Modifications to the system need to be done but a complete overhaul was not necessary.*-**
C/bce 61. Health care reform should not jeopardize the insurance of those who choose to have private health care.
C/bce 70. All Americans who pay taxes should have health coverage.
C/bcf 24. Insurance companies should be more heavily regulated to assure fairness.
C/bde 10. **Keep the bureaucrats out of health care. They cannot take care of and/or afford the systems they currently have (social security, VA, Medicare/aid).*-**
C/bde 29. The government has no right to control the health care system. Let the free market bring costs down as the laws of economics dictate with supply/demand. ~~
C/bde 38. The news media generally did a poor job of explaining what health care reform was all about.
C/bde 42. The government should not be in the business of running health care.
C/bde 51. **Insurance companies shouldn't be allowed to drop coverage for people who develop an expensive illness.*+ ~~**
C/bde 52. **In my view, the mandate for individuals to buy health insurance is unconstitutional.*-**
C/bde 57. **I do not think it is the United States government's responsibility to fix health care problems.*- ~~**
C/bde 7. News media reporting on health care reform focused too much on politics and not enough on why health care reform is needed.
C/bdf 22 **If I need medical care today, I will most likely go to a hospital emergency room or after-hours clinic rather than to a private physician.*# ~~**
C/bdf 34. We don't have a health care crisis in this country.
C/bdf 35. **The whole health care delivery system needs to be overhauled.*+**
C/bdf 37. The news media were very biased in their coverage of health care reform.
C/bdf 6. **Other political issues, such as the economy and fighting two wars, are more important than health care reform.*-**

APPENDIX B
(Examples of Thurstone Equal Appearing Interval Scales)

Feelings - Republicans promised they would repeal and replace Obamacare, and I want them to keep that promise.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	70.0	70.0	70.0
	2	1	10.0	10.0	80.0
	3	1	10.0	10.0	90.0
	Strongly Agree	1	10.0	10.0	100.0
	Total	10	100.0	100.0	

This is a good statement to include because judges selected the extreme ends of the Thurstone Equal Appearing Interval Scale, indicating this statement likely will define different factor arrays.

Morality 1 - The media provided incorrect information about the GOP's efforts to repeal Obamacare, and how it will affect health insurance.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	10.0	11.1	11.1
	5	1	10.0	11.1	22.2
	Neutral	5	50.0	55.6	77.8
	8	1	10.0	11.1	88.9
	Strongly Agree	1	10.0	11.1	100.0
	Total	9	90.0	100.0	
Missing	System	1	10.0		
Total		10	100.0		

This statement clusters in the neutral position with few moving toward the extremes. This statement, therefore, should be considered for elimination if it does not contain an aspect vital to the study. If it does contain such an element, then rewriting the statement is advisable.

APPENDIX C
(Frames from Crimson Hexagon Data)

Topic	Weight	Topic Members
Topic1	1.99156	bill - state - vote - republican - senate - repeal - republicans – health care -health - aca -
Topic2	0.20741	coverage - grant - people - law - block - claim - system - insurance – health care - cbo -
Topic3	0.18404	obamacare - care - editorial - hurricane - government - test - reason - hit - copy - hearing -
Topic4	0.14448	condition - friday - preexisting - insurer - coverage - health - people - charge - late - heart -
Topic5	0.12577	alexander - tuesday - talk - pence - murray - letter - democrats - deal - dramatically - enact -
Topic6	0.11546	committee - hearing - isakson - call - friday - news - hear - finance - industry - alexander -
Topic7	0.09457	murkowski - alaska - information - political - voting - seek - wednesday - support - seat - capitol -

Underlying structures:
Topic 1 = Government-related
Topic 2 = Resentment
Topic 3 = Current health care system
Topic 4 = Medical, insurance conditions
Topic 5 = Specific political actions or actors
Topic 6 = Media-related
Topic 7 = Opposition & votes